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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,957	01/11/2001	Robert N. Hanson	ZAA-011.01	9648

25181 7590 04/11/2002

FOLEY, HOAG & ELIOT, LLP
PATENT GROUP
ONE POST OFFICE SQUARE
BOSTON, MA 02109

EXAMINER
GARCIA, MAURIE E

ART UNIT	PAPER NUMBER
1627	

DATE MAILED: 04/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

You received an office action from the Patent & Trademark Office on 3/21/02. The action you received belong to another application. Please disregard that action. Attached you will find the Office Action belonging to your application filed on 1/11/01. You statutory respone period will start from the date of this letter.

Brenda Gray

Thanks
Brenda Gray
SLIE, TC 1600

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,975	11/22/2000	Joseph A. Affholter	02-025821US	1554

22798 7590 03/21/2002

LAW OFFICES OF JONATHAN ALAN QUINE
P O BOX 458
ALAMEDA, CA 94501

EXAMINER
PONNALURI, PADMASHRI

ART UNIT	PAPER NUMBER
1627	

DATE MAILED: 03/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Restarted time on 4/11/02 due to wrong cover sheet was mailed out with this action.

S. Gray
4-10-02

Office Action Summary

Application No.	Applicant(s)
09/758,957	Hanson et al
Examiner	**Art Unit**
Maurie E. Garcia, Ph. D.	1627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *ONE* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-54* is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claims *1-54* are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Please Note: In an effort to enhance communication with our customers and reduce processing time, Group 1627 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The Fax number is 703-308-4315. A Fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Jyothsna Venkat, Supervisory Patent Examiner, at (703) 308-2439. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-14 and 43 (in part), drawn to a polypharmacophore comprising the general formula (**I**) or (**IA**) and a pharmaceutical composition comprising the polypharmacophore, classified in various classes depending on the actual structure of the polypharmacophore, for example, any of class 540-570, subclasses various.

II. Claims 15-42 and 43 (in part), drawn to a polypharmacophore comprising the general formula (**II**), (**IIA**), (**III**) or (**IIIA**) and a pharmaceutical composition comprising the polypharmacophore, classified in various classes depending on the actual structure of the polypharmacophore, for example, any of class 540-570, subclasses various.

III. Claims 44-46 (in part), drawn to a method of treating a disease or condition involving two or more biological sites by administering a polypharmacophore of the general formula (**I**) or (**IA**),classified in various classes depending on the actual structure of the polypharmacophore administered and/or the disease treated, for example, any of classes 514 or 424, subclasses various..

IV. Claims 44-46 (in part), drawn to a method of treating a disease or condition involving two or more biological sites by administering a polypharmacophore of the general formula (**II**), (**IIA**), (**III**) or (**IIIA**), classified in various classes depending on the actual structure of the polypharmacophore administered and/or the

disease treated, for example, any of classes 514 or 424, subclasses various.

V. Claims 47-50 (in part), drawn to a library of polypharmacophores comprising the general formula **(I)** or **(IA)**, classified in various classes depending on the actual structure of the polypharmacophores of the library, for example, any of class 435, DIG 22 or 34-39.

VI. Claims 47-50 (in part), drawn to a library of polypharmacophores comprising the general formula **(II)**, **(IIA)**, **(III)** or **(IIIA)**, classified in various classes depending on the actual structure of the polypharmacophores of the library, for example, any of class 435, DIG 22 or 34-39.

VII. Claim 51 (in part), drawn to a method for determining one or more biological activities of a polypharmacophore of the general formula **(I)** or **(IA)**, classified in various classes depending on the actual structure of the polypharmacophore(s) used, for example, class 435, subclass 4+ or DIG 14-19; class 436, subclass 501+ or class 424, subclasses 9.1+.

VIII. Claim 51 (in part), drawn to a method for determining one or more biological activities of a polypharmacophore of the general formula **(II)**, **(IIA)**, **(III)** or **(IIIA)**, classified in various classes depending on the actual structure of the polypharmacophore(s) used, for example, class 435, subclass 4+ or DIG 14-19; class 436, subclass 501+ or class 424, subclasses 9.1+.

IX. Claims 52-54 (in part), drawn to a labeled compound comprising a polypharmacophore that comprises the general formula **(I)** or **(IA)**, classified in various classes depending on the actual structure of the polypharmacophore and the label used, for example, class 424 subclasses 1.11+.

X. Claims 52-54 (in part), drawn to a labeled compound comprising a polypharmacophore that comprises the general formula **(II)**, **(IIA)**, **(III)** or **(IIIA)**, classified in various classes depending on the actual structure of the polypharmacophore and the label used, for example, class 424 subclasses 1.11+.

2. The inventions are distinct, each from the other because of the following reasons:

3. Groups I – II, V – VI and IX – X represent separate and distinct products. They differ in respect to their properties, their use and the synthetic methodology for making them. Therefore, they have different issues regarding patentability and enablement and represent patentably distinct subject matter. This is elaborated upon below. See also paragraph 11.

4. In the instant case, the libraries of Groups V – VI are compositions comprising at least two members, while Groups I – II and IX – X represent distinct compounds. Libraries and single compounds also have different uses and require different methods of making. The single compounds of Groups I – II and IX – X are different from each other because they comprise structurally different compounds and are made from different starting materials. Specifically, the labeled compounds of Groups IX – X require a "detection agent" and thus would be structurally distinct from the unlabeled compounds of Groups I – II.

5. Groups III – IV and VII – VIII are different methods. The methods are different because they use different steps, require different reagents and will produce different products and/or results. They therefore have different issues regarding patentability and enablement and represent patentably distinct subject matter. This is elaborated upon below. See also paragraph 11.

6. In the instant case, the methods of treatment (Groups III – IV) are completely different from the methods for determining one or more biological activities of a polypharmacophore (Groups VII – VIII) requiring different method steps and having completely different end results (treatment of a disease/condition versus determination of one or more biological activities).

7. Groups I – II and III – IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the disease/conditions of the instant claims could be treated with a variety of different compounds and the compounds of Groups I – II could be used as diagnostic agents.

8. Groups I – II and/or V – VI and VII – VIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the single compounds of Groups I – II and the libraries of Groups V – VI can be used in substantially different processes; i.e. used as a starting material for synthesis of libraries (Groups I – II) or synthesis of further (more elaborate) libraries (Groups V – VI).

9. The labeled compounds of Groups IX – X are not related to the methods of Groups III – IV and VII – VIII. The inventions are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. In the instant case, there is nothing in the claims that indicates that labeled compounds are to be used in any of the methods. However, if applicant were to argue that the labeled compounds of Groups IX – X could be used in the methods of Groups III – IV or VII – VIII, then the rationale set forth in paragraph 8 above applies.

10. The libraries of Groups V – VI are not related to the methods of treatment of Groups III – IV. The inventions are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. In the instant case, there is nothing in the claims that indicates that libraries are to be used in the methods of treatment. However, if applicant were to argue that the libraries of Groups V – VI could be used in the methods of Groups III – IV, then the rationale set forth in paragraph 8 above applies.

11. Each of the Groups I – II, III – IV, V – VI, VII – VIII and IX – X differ from each other because of the structure of the polypharmacophore recited in the claims. Each of the polypharmacophores of the general formulas **(I)/(IA)** and **(II)/(IIA)/(III)/(IIIA)** are deemed to have a chemically different structure.

12. These inventions have acquired a separate status in the art as shown by their different classification and/or divergent subject matter. The different methods and products would require completely different searches in both the patent and non-patent databases, and there is no expectation that the searches would be coextensive. Therefore, this does create an undue search burden, and restriction for examination purposes as indicated is proper.

13. This application contains claims directed to patentably distinct species of the claimed invention for **Groups I – X**. Election is required as follows.

14. If applicant elects the invention of **Group I**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claims 8-12 and 43 are generic.

Species of polypharmacophore; general

Species 1: Containing **no** additional modifiers (D); e.g. claims 1-7
Species 2: Containing additional modifiers (D)

Species of pharmacophoric unit

Species 1: D-1 agonist
Species 2: D-2 agonist
Species 3: D-3 agonist
Species 4: D-4 agonist
Species 5: irreversible monoamine inhibitor
Species 6: reversible monoamine inhibitor
Species 7: monoamine transporter inhibitor
Species 8: COMT inhibitor
Species 9: MAO inhibitor
Species 10: dopamine transporter inhibitor

Species of modifier unit (if present)

Species 1: spacer

Species 2: scaffold assembler
Species 3: delivery modulator
Species 4: bioactivating group
Species 5: detection agent
Species 6: agent to increase solubility
Species 7: targeting agent

Species of polypharmacophore; specific

Finally, a *specific* polypharmacophore compound should be elected, defining all variable groups (S, P, M, D (if present), x, y, a (if present) and b (if present)) and showing the bonds between them.
Please note that a ***specific*** S, P, M and D (if present) should be elected by chemical structure. If more than one P, M or D is present in the elected compound, they should all be defined.
The election should result in a ***single compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

15. If applicant elects the invention of **Group II**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claims 22-26 and 43 are generic.

Species of polypharmacophore; general

Species 1: Containing **no** additional modifiers (D); e.g. claims 15-21
Species 2: Containing additional modifiers (D)

Species of pharmacophoric unit

Species 1: D-1 agonist
Species 2: D-2 agonist
Species 3: D-3 agonist
Species 4: D-4 agonist
Species 5: irreversible monoamine inhibitor
Species 6: reversible monoamine inhibitor
Species 7: monoamine transporter inhibitor
Species 8: COMT inhibitor
Species 9: MAO inhibitor
Species 10: dopamine transporter inhibitor

Species of modifier unit (if present)

Species 1: spacer
Species 2: scaffold assembler
Species 3: delivery modulator
Species 4: bioactivating group
Species 5: detection agent
Species 6: agent to increase solubility
Species 7: targeting agent

Species of polypharmacophore; specific

Finally, a *specific* polypharmacophore compound should be elected, defining all variable groups (S, A, B, C, D (if present), a (if present), b (if present) and c (if present)) and showing the bonds between them.
Please note that a ***specific*** S, A, B, C and D (if present) should be elected by chemical structure. If more than one D is present in the elected compound, they should all be defined.
The election should result in a ***single compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

16. If applicant elects the invention of **Group III**, applicant is required to elect from the following patentably distinct species. Claims 44-46 are generic.

Species of polypharmacophore administered

First, one of formula **(I)** or **(IA)** should be elected.
Then, a *specific* polypharmacophore compound that is administered in the method should be elected, defining ***all*** variable groups in the compound.
The election should result in a ***single compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. Specifically, they would also differ in their reactivity, mode of action in the body and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

17. If applicant elects the invention of **Group IV**, applicant is required to elect from the following patentably distinct species. Claims 44-46 are generic.

Species of polypharmacophore administered

First, one of formula **(II)**, **(IIA)**, **(III)** or **(IIIA)** should be elected.
Then, a *specific* polypharmacophore compound that is administered in the method should be elected, defining ***all*** variable groups in the compound.
The election should result in a ***single compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. Specifically, they would also differ in their reactivity, mode of action in the body and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

18. If applicant elects the invention of **Group V**, applicant is required to elect from the following patentably distinct species. Claims 47-50 are generic.

Species of core polypharmacophore compound

First, one of formula **(I)** or **(IA)** should be elected.
Then, a *specific* core polypharmacophore compound of the library should be elected, defining ***all*** variable groups in the core compound.
The election should result in a ***single core compound that is common to all library members***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

19. If applicant elects the invention of **Group VI**, applicant is required to elect from the following patentably distinct species. Claims 47-50 are generic.

Species of core polypharmacophore compound

First, one of formula **(II)**, **(IIA)**, **(III)** or **(IIIA)** should be elected.
Then, a *specific* core polypharmacophore compound of the library should be elected, defining ***all*** variable groups in the core compound.

The election should result in a ***single core compound that is common to all library members***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

20. If applicant elects the invention of **Group VII**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claims 47-50 are generic.

Species of polypharmacophore tested; general
First, one of formula **(I)** or **(IA)** should be elected.
Then, elect from the following:
Species A: single polypharmacophore
Species B: library of polypharmacophores

Species of polypharmacophore tested; specific
A *specific* polypharmacophore compound or core polypharmacophore compound that is tested in the method should be elected, defining ***all*** variable groups in the compound/core compound.
The election should result in a ***single compound species*** or a ***single core compound that is common to all library members***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

21. If applicant elects the invention of **Group VIII**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claims 47-50 are generic.

Species of polypharmacophore tested; general
First, one of formula **(II)**, **(IIA)**, **(III)** or **(IIIA)** should be elected.

Then, elect from the following:

Species A: single polypharmacophore
Species B: library of polypharmacophores

Species of polypharmacophore tested; specific

A *specific* polypharmacophore compound or core polypharmacophore compound that is tested in the method should be elected, defining ***all*** variable groups in the compound/core compound.
The election should result in a ***single compound species*** or a ***single core compound that is common to all library members***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

22. If applicant elects the invention of **Group IX**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claim 52 is generic.

Species of labeling site

Species 1: pharmacophoric unit
Species 2: scaffold unit
Species 3: modifier unit

Species of label

Species 1: radionuclide; e.g. claim 53
Species 2: fluorescent; e.g. claim 54

Species of labeled compound

First, one of formula (**I**) or (**IA**) should be elected.
Then, a *specific* labeled compound should be elected, defining ***all*** variable groups in the compound and showing the label, its structure and connectivity to the rest of the compound.
The election should result in a ***single labeled compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

23. If applicant elects the invention of **Group X**, applicant is required to elect from the following patentably distinct species. Please elect one species from *each* subgroup below. Claim 52 is generic.

Species of labeling site
Species 1: pharmacophoric unit
Species 2: scaffold unit
Species 3: modifier unit

Species of label
Species 1: radionuclide; e.g. claim 53
Species 2: fluorescent; e.g. claim 54

Species of labeled compound
First, one of formula **(II)**, **(IIA)**, **(III)** or **(IIIA)** should be elected.
Then, a *specific* labeled compound should be elected, defining ***all*** variable groups in the compound and showing the label, its structure and connectivity to the rest of the compound.
The election should result in a ***single labeled compound species***.

The species are distinct, each from the other, because their structures and modes of action are different. They would also differ in their reactivity and the starting materials from which they are made. Therefore, the species have different issues regarding patentability and represent patentably distinct subject matter.

24. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

25. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and ***a listing of all claims readable thereon***, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied

by an election.

26. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

27. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

28. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143). Because the above restriction/election requirement is complex, a telephone call to applicants to request an oral election was not made. See MPEP § 812.01.

29. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

30. Applicant is also reminded that a 1 - month (not less than 30 days) shortened statutory period will be set for response when a written requirement is made without an action on the merits. This period may be extended under the provisions of 37 CFR 1.136(a). Such action will not be an "action on the merits" for purposes of the second action final program, see MPEP 809.02(a).

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maurie E. Garcia, Ph.D. whose telephone number is (703) 308-0065. The examiner can normally be reached on Monday-Thursday from 9:30 to 7:00 and alternate Fridays.

32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jyothsna Venkat, can be reached on (703) 308-2439. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 308-0196.

Maurie E. Garcia, Ph.D.
March 15, 2002

MAURIE E. GARCIA, PH.D
PATENT EXAMINER